

CLAIMS

1. A hydraulic mechanism such as a motor or a pump comprising a cam (10) and a cylinder block (12) suitable for rotating relative to each other about an axis of rotation, the cylinder block having a plurality of cylinders (14, 14A, 14B; 114A) connected via cylinder ducts to communication orifices disposed in a communication face (18; 118) of the cylinder block, pistons (16; 116) slidably mounted in the cylinders being suitable for co-operating with the cam, the motor further comprising a fluid distributor (20), constrained in rotation with the cam about the axis of rotation (A), and having a distribution face (22) which is provided with distribution orifices (31A-31F, 32A-32F) comprising orifices (31A-31F) suitable for being connected to a feed duct and orifices (32A-32F) suitable for being connected to a discharge duct, said distribution face (22) and said communication face (18) facing each other so as to put the communication orifices into communication with the distribution orifices as the cylinder block and the distributor rotate relative to each other;
- said hydraulic mechanism being characterized in that at least certain cylinders (14, 14A, 14B; 114A) are connected to at least two communication orifices (34A, 35A; 34B, 35B; 134A, 135A) spaced apart angularly so that, when a first communication orifice (34A; 34B; 134A) of such a cylinder communicates with a first distribution orifice (31A; 31B; 131A) connected to the feed duct or to the discharge duct, a second communication orifice (35A; 35B; 135A) of the same cylinder communicates with a second distribution orifice (31B; 31C; 131B) connected to the same duct.
2. A hydraulic mechanism according to claim 1, characterized in that, with the cam (10, 110) having n cam lobes, the angular spacing (α) between two communication orifices (34A, 35A; 134A, 135A) of the same

cylinder (14A; 114A) is substantially equal to a multiple of $360^\circ/n$.

3. A hydraulic mechanism according to claim 1 or claim 2,
5 characterized in that at least certain cylinders (114A) are connected to two communication orifices (134A, 135A) which are situated in an area of the communication face (118) that is defined by the projection, onto said face and parallel to the axis of rotation (A), of two
10 generator lines (G1, G2) of the cylinder (114A) in question that are opposite each other on a diametrical plane of said cylinder that is perpendicular to said axis (A).
- 15 4. A hydraulic mechanism according to any one of claims 1 to 3, characterized in that at least certain cylinders are connected to two communication orifices (34A, 35A) which are disposed symmetrically about a plane defined by the axis (A14) of the cylinder in question and by the
20 axis of rotation (A) (Figure 6).
5. A hydraulic mechanism according to any one of claims 1 to 4, characterized in that at least certain cylinders (14A) are connected to two communication orifices (34A,
25 35A), one of which (34A) intersects a plane defined by the axis (A14) of the cylinder (14A) in question and by the axis of rotation (A) (Figure 2).
- 30 6. A hydraulic mechanism according to any one of claims 1 to 5, characterized in that each cylinder (14, 14A, 14B) is connected to two communication orifices (34A, 35A, 34A, 35B).
- 35 7. A hydraulic mechanism according to claim 6, characterized in that the angular spacing (α) between the two communication orifices (34A, 35A; 34B, 35B) of the

same cylinder (14A; 14B) is the same for all of the cylinders (14).

8. A hydraulic mechanism according to claim 7,
5 characterized in that, with the cam (10) having n cam lobes (9A-9F), said angular spacing (α) is equal to $360^\circ/n$.

9. A hydraulic mechanism according to any one of claims 1
10 to 10, characterized in that the cam (10) has a plurality of cam lobes (9A-9F), each of which comprises a rising ramp (91A, 91F) and a falling ramp (92A-92F), each of which is associated with a respective distribution
15 orifice, a cam lobe being considered to be active when the distribution orifice associated with its rising ramp is connected to the feed duct and when the distribution orifice associated with its falling ramp is connected to the discharge duct, the hydraulic mechanism having a
large active operating cubic capacity in which all of the
20 cam lobes (9A, 9C, 9E) are active, and a small active operating capacity in which only some of the cam lobes are active, and in that the cam lobes that are active in the small active operating cubic capacity are disposed asymmetrically (Figure 6).